

Listing of Claims:

Claims 1-11 (Previously Cancelled)

12. (Currently Amended) A method for depositing a phosphor pattern comprising phosphor particles on an article using a direct-write tool, comprising the steps of:

providing a particulate suspension of said phosphor particles having a viscosity of not greater than 30 centipoise, wherein said phosphor particles are substantially spherical and have a weight average particle size of from about 0.1 μm to about 20 μm ; and

depositing said particulate suspension on said article using a direct-write tool that is controllable over an x-y grid.

13. (Previously Presented) A method as recited in Claim 19, wherein said average particle size is from about 0.3 μm to about 10 μm .

14. (Previously Presented) A method as recited in Claim 19, wherein said particles comprise metal oxide phosphor particles.

15. (Previously Presented) A method as recited in Claim 19, wherein said particles comprise metal sulfide phosphor particles.

16. (Previously Presented) A method as recited in Claim 19, wherein said article is a panel for a flat panel display.

17. (Previously Presented) A method as recited in Claim 19, wherein said phosphor particles have an apparent density of not greater than about 20 percent of the theoretical density of the phosphor compound.

18. (Previously Presented) A method as recited in Claim 19, wherein said phosphor particles comprise hollow particles.

19. (Previously Presented) A method as recited in Claim 12, wherein said direct-write tool is selected from one of an automated syringe and an ink-jet device.

Claims 20-23. (Previously Cancelled)

24. (Currently Amended) A method for forming a flat panel display, comprising the steps of:

- a) providing a flat panel display screen;
- b) depositing at least first phosphor particles on said display screen, wherein said step of depositing comprises using a direct-write tool controllable over an x-y grid to deposit a liquid suspension having a viscosity of not greater than 30

centipoise and comprising said first phosphor particles in predetermined pixel regions to form pixels wherein said first phosphor particles have an average size of not greater than about 20 μm and a substantially spherical morphology.

25. (Previously Presented) A method as recited in Claim 19, wherein said phosphor particles have a size distribution wherein at least about 80 weight percent of said phosphor particles are not larger than twice said average particle size.

26. (Previously Presented) A method as recited in Claim 19, wherein said phosphor particles have a size distribution wherein at least about 90 weight percent of said phosphor particles are not larger than twice said average particle size.

27. (Previously Presented) A method as recited in Claim 19, wherein said particulate suspension comprises a water-based liquid vehicle.

28. (Previously Cancelled)

29. (Previously Presented) A method as recited in Claim 19, wherein said phosphor pattern comprises predetermined pixel regions.

30. (Previously Presented) A method as recited in Claim 34, wherein said flat panel display is a field emission display.

31. (Previously Presented) A method as recited in Claim 34, wherein said flat panel display is a plasma display panel.

32. (Previously Presented) A method as recited in Claim 34, wherein said phosphor particles have an average size of from about 0.3 μm to about 10 μm .

33. (Previously Presented) A method as recited in Claim 34, further comprising the step of depositing at least second phosphor particles on said display screen, wherein said step of depositing comprises using said direct-write tool controllable over an x-y grid to deposit said second phosphor particles in said predetermined pixel regions wherein said second phosphor particles have an average size of not greater than about 20 μm and a substantially spherical morphology and have a composition different than said first phosphor particles.

34. (Previously Presented) A method as recited in Claim 24, wherein said direct-write tool is selected from one of an ink-jet device and an automated syringe.

35. (Previously Presented) A method as recited in Claim 34, wherein said phosphor particles comprise metal oxide phosphor particles.

36. (Previously Presented) A method as recited in Claim 34, wherein said phosphor particles comprise metal sulfide phosphor particles.

37. (Previously Presented) A method as recited in Claim 34, wherein said phosphor particles have a size distribution wherein at least about 80 weight percent of said phosphor particles are not larger than twice said average particle size.

38. (Previously Presented) A method as recited in Claim 34, wherein said phosphor particles have a size distribution wherein at least about 90 weight percent of said phosphor particles are not larger than twice said average particle size.

39. (Previously Presented) A method as recited in Claim 19 wherein said direct-write tool is an automated syringe.

40. (Previously Presented) A method as recited in Claim 34, wherein said direct-write tool is an automated syringe.

41. (Currently Amended) A method for depositing a phosphor pattern comprising phosphor particles on an article using an ink-jet device, the method comprising the steps of:
providing a particulate suspension of said phosphor particles having a viscosity of not greater than 30 centipoise, wherein said phosphor particles are substantially spherical and have a weight average particle size of from about 0.1 μm to about 20 μm ; and
depositing said particulate suspension on said article using an ink-jet device that is controllable over an x-y grid.

42. (Currently Amended) A method for forming a flat panel display, comprising the steps of:

- a) providing a flat panel display screen; and
- b) depositing at least first phosphor particles on said display screen, wherein said step of depositing comprises using an ink-jet device controllable over an x-y grid to deposit a liquid suspension in predetermined pixel regions to form pixels, said liquid suspension having a viscosity of not greater than 30 centipoise and comprising said first phosphor particles, wherein said first phosphor particles have an average size of not greater than about 20 μm and a substantially spherical morphology.